



Inspections of RCRA Container Storage Areas

BACKGROUND: Thorough and regular inspection of RCRA hazardous and radioactive mixed waste containers, their covers and closure devices, and container storage areas at DOE facilities is critical to ensure proper operating practices; promote worker safety; prevent leaks, spills, and other releases; and protect human health and the environment. To properly carry out their inspection responsibilities, owners/operators must be able to recognize unsafe conditions and environmental hazards and must also adhere to formal inspection procedures, including preparing schedules and keeping detailed records.

The previous Information Brief on this subject (EH-231-033/0793) provided an answer to the first question which caused some confusion. This Information Brief provides additional response to the first question to clarify the inspection requirements for generators or transporters of hazardous or radioactive mixed waste. Therefore, this Information Brief supercedes the earlier one and should be used in its place.

STATUTE: Resource Conservation and Recovery Act (RCRA).

REGULATIONS: 40 CFR 264.15, 264.174, 264.1086, 265.15, 265.174, & 265.1087.

REFERENCES:

1. *Multi-Media Compliance Audit Procedures*, U.S. Environmental Protection Agency, National Enforcement Investigations Center, EPA-330/9-89-003-R, March 1989.
2. *RCRA Inspection Manual*, U.S. Environmental Protection Agency, Office of Waste Programs Enforcement, OSWER 9938.2A, March 1988.
3. *Federal Environmental Inspection Handbook*, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, DOE/EH-0220, October 1991.

Who is subject to RCRA inspection requirements?

RCRA inspection requirements apply to owners and operators of permitted and interim status container storage areas at DOE facilities. There are no *specific* RCRA inspection requirements for generators or transporters of hazardous or radioactive mixed waste. However, general inspection requirements do apply to generators. Specifically, 40 CFR 262.34(a)(1)(i) states:

(a) Except as provided in paragraphs (d), (e), and (f) of this section, a generator may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, provided that:

(1) The waste is placed: (i) In containers and the generator complies with Subpart I of 40 CFR part 265.

Subpart I to 40 CFR 265 contains 265.174, which deals specifically with inspections (i.e., weekly inspections).

How frequently should containers be inspected?

Waste management personnel must inspect containers and container storage areas at least weekly to detect any leaking or deteriorating containers/containment systems or

faulty equipment (264/265.174). Also, to comply with 40 CFR 264/265 *Subpart CC air emission standards*, owners/operators must visually inspect the container, cover, and closure devices on or before the date they first manage hazardous waste or accept possession of the container (unless emptied within 24 hours of receipt); and annually thereafter.

However, when inspecting containers holding certain radioactive mixed wastes, compliance with RCRA inspection requirements may result in radiological exposures to workers in excess of radiation protection standards specified in DOE Order 5480.11, "Radiation Protection for Occupational Workers." In such cases, DOE Operations Offices should seek agreement with the EPA Regional Administrator or authorized State Director on an alternative inspection requirement [pursuant to RCRA Section 1006(a)], to ensure that radiological exposures to workers are as low as reasonably achievable (ALARA). Such an alternative could require DOE to use robotics, video cameras and release detection equipment in place of direct involvement by workers to ensure the integrity of containers in storage.

Owners/operators must develop and adhere to a written schedule for inspections. The schedule must identify the types of potential problems to be evaluated during an inspection and must be kept at the DOE storage facility. The inspection schedule must be submitted as part of the RCRA permit application and may be amended by the Regional Administrator or State Director (40 CFR 264.15 and 265.15).

What are the proper procedures for inspecting containers?

Visual inspection of hazardous waste containers in RCRA storage areas is conducted as a means of identifying any problems that may pose a threat to human health and the environment. The inspector should examine the surface of the containers for signs that their structural integrity has deteriorated. In particular, the inspector should check for severe rusting, swelling, excessive dents, cracks, punctures, or any other signs of structural defects (e.g., leaks, spills, liquid on the surface of the container) as well as for visible cracks, holes, gaps, or other open spaces into the interior of the container when the container and its cover and closure devices are secured in the closed position. Containers should not be left open for extended periods of time and should be handled in such a way as to minimize the potential for ruptures or other damage (see Reference 2 above for additional information).

How should the container storage area be inspected?

The inspector of a container storage area should look for drums stored in unauthorized areas (e.g., outside of containment systems), evaluate the security around the unit, determine whether there is sufficient aisle space, check storage runoff areas for dead vegetation or stains, and ensure that safety and emergency equipment are in proper working order.

The inspector should verify that evidence of past spills correlates with the operating record. Owners and operators must have a waiver from the local community fire marshal for storing containers of ignitable or reactive waste within 15 meters of the property boundary, even if they are inside the storage facility structure. The inspector should also verify that the containment system is free from cracks, gaps, or other signs of deterioration and that it is free from standing liquids (see Reference 2 above for additional information).

What specific items should the inspector look for at a container storage area?

While not necessarily exhaustive, the following "checklist" can be used as a guide for inspecting RCRA container storage areas (40 CFR 264 & 265 Subpart I):

- ☐ Do the containers appear to be in good condition?
- ☐ Are the containers made of materials that will not react with the waste stored in the containers?
- ☐ Are the containers always closed when in use?
- ☐ Are containers inspected at least weekly?
- ☐ Are containers, covers, closure devices, and closed-vent systems that are used to hold hazardous waste with an average volatile organic (VO) concentration equal to or greater than 500 parts per million by weight (ppmw) at the *point of waste origination* visually inspected on or

before the date they are first used (for hazardous waste) or accepted (unless emptied within 24 hours of receipt) and annually thereafter?

- ☐ Does the container storage area have a containment system and is the system in good condition?
- ☐ Are containers holding ignitable or reactive wastes located at least 50 feet from the facility property line?
- ☐ Are incompatible wastes stored in different containers?
- ☐ Are containers of incompatible wastes separated by a berm, dike, wall, or other device?
- ☐ Are containers which previously held incompatible wastes washed and cleaned before reuse?
- ☐ At closure, were all hazardous wastes and associated residues removed from the containment system and associated structures?

What are the inspection record keeping requirements?

All inspections must be recorded in an inspection log or summary and must be maintained for a minimum of three years from the date of inspection. These records must at least include the date and time of the inspection, the name of the inspector, a summary of the observations made during the inspection, and the date and nature of any repairs or remedial actions to address the problems noted [40 CFR 264.15(d) and 265.15(d)].

What should be done if the inspector finds a problem?

If the inspector finds a container that is not in good condition (e.g., severe rusting or apparent structural defects) or if a container is leaking, the waste must be transferred to a container in good condition or be managed in some other way that complies with RCRA requirements (40 CFR 264.171 and 265.171). Also, when a defective container, cover, or closure device is detected, first attempts to repair the defect must be made within 24 hours, with either the repair being completed or the waste being removed no later than five calendar days after detection.

Owners/operators of RCRA container storage areas must remedy any deterioration or malfunction of equipment or structures revealed by the inspection on a schedule that ensures the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, a response action must be taken immediately (e.g., transfer contents of a leaking container to a new container, clean up a spill) [40 CFR 264.15(c) and 265.15(c)].

Questions of policy or questions requiring policy decisions will not be dealt with in EH-413 Information Briefs unless that policy has already been established through appropriate documentation. Please refer any questions concerning the subject material covered in this Information Brief to
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